

Vijay Kumar

List of Publications by Year in descending order

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87
papers

4,239
citations

109137

35
h-index

114278

63
g-index

88
all docs

88
docs citations

88
times ranked

3715
citing authors

#	ARTICLE	IF	CITATIONS
1	Upconversion based temperature sensing ability of Er ³⁺ Yb ³⁺ codoped SrWO ₄ : An optical heating phosphor. Sensors and Actuators B: Chemical, 2015, 209, 352-358.	4.0	355
2	Defect correlated fluorescent quenching and electron phonon coupling in the spectral transition of Eu ³⁺ in CaTiO ₃ for red emission in display application. Journal of Applied Physics, 2014, 115, .	1.1	250
3	The energy transfer phenomena and colour tunability in Y ₂ O ₃ :S:Eu ³⁺ /Dy ³⁺ micro-fibers for white emission in solid state lighting applications. Dalton Transactions, 2014, 43, 9860-9871.	1.6	212
4	Magical Allotropes of Carbon: Prospects and Applications. Critical Reviews in Solid State and Materials Sciences, 2016, 41, 257-317.	6.8	167
5	Current advancement and future prospect of biosorbents for bioremediation. Science of the Total Environment, 2020, 709, 135895.	3.9	165
6	Enhanced upconversion and temperature sensing study of Er ³⁺ Yb ³⁺ codoped tungsten tellurite glass. Sensors and Actuators B: Chemical, 2014, 202, 1305-1312.	4.0	152
7	Tunable and white emission from ZnO:Tb ³⁺ nanophosphors for solid state lighting applications. Chemical Engineering Journal, 2014, 255, 541-552.	6.6	146
8	Effect of gamma irradiation on the properties of plastic bottle sheet. Nuclear Instruments & Methods in Physics Research B, 2012, 287, 10-14.	0.6	124
9	Carbon ion beam induced modifications of optical, structural and chemical properties in PADC and PET polymers. Radiation Physics and Chemistry, 2012, 81, 652-658.	1.4	113
10	Effect of annealing on the structural, morphological and photoluminescence properties of ZnO thin films prepared by spin coating. Journal of Colloid and Interface Science, 2014, 428, 8-15.	5.0	107
11	Effect of Eu doping on the photoluminescence properties of ZnO nanophosphors for red emission applications. Applied Surface Science, 2014, 308, 419-430.	3.1	105
12	Water retention and dye adsorption behavior of Gg-cl-poly(acrylic acid-aniline) based conductive hydrogels. Geoderma, 2014, 232-234, 45-55.	2.3	100
13	The role of surface and deep-level defects on the emission of tin oxide quantum dots. Nanotechnology, 2014, 25, 135701.	1.3	99
14	A Review of Adsorbents for Heavy Metal Decontamination: Growing Approach to Wastewater Treatment. Materials, 2021, 14, 4702.	1.3	95
15	Luminescence dynamics and investigation of Judd-Ofelt intensity parameters of Sm ³⁺ ion containing glasses. Optical Materials, 2017, 64, 171-178.	1.7	81
16	Synthesis and properties of poly(acrylamide-aniline)-grafted gum ghatti based nanospikes. RSC Advances, 2013, 3, 25830.	1.7	80
17	Doped zinc oxide window layers for dye sensitized solar cells. Journal of Applied Physics, 2013, 114, .	1.1	73
18	Synthesis and biodegradation studies of gamma irradiated electrically conductive hydrogels. Polymer Degradation and Stability, 2014, 107, 166-177.	2.7	67

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19	Advances in ZnO: Manipulation of defects for enhancing their technological potentials. Nanotechnology Reviews, 2022, 11, 575-619.	2.6	65
20	Synthesis of Biodegradable Gum ghatti Based Poly(methacrylic acid-aniline) Conducting IPN Hydrogel for Controlled Release of Amoxicillin Trihydrate. Industrial & Engineering Chemistry Research, 2015, 54, 1982-1991.	1.8	64
21	Influence of ultrasonication times on the tunable colour emission of ZnO nanophosphors for lighting applications. Ultrasonics Sonochemistry, 2014, 21, 1549-1556.	3.8	63
22	Application of biodegradable superabsorbent hydrogel composite based on Gum ghatti-co-poly(acrylic) Tj ETQq0 0 0 rgBT /Overlock 10 T	2.7	63
23	Swift heavy ion irradiation induced modification in structural, optical and luminescence properties of Y2O3:Tb3+ nanophosphor. Journal of Luminescence, 2014, 146, 162-173.	1.5	62
24	Synthesis, characterization and water retention study of biodegradable Gum ghatti-poly(acrylic) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 5	2.7	60
25	Study of optical, structural and chemical properties of neutron irradiated PADC film. Vacuum, 2011, 86, 275-279.	1.6	51
26	Spectroscopic studies of Sm3+/Dy3+ co-doped lithium boro-silicate glasses. Journal of Non-Crystalline Solids, 2016, 438, 49-58.	1.5	50
27	Fabrication and characterization of gum ghatti-polymethacrylic acid based electrically conductive hydrogels. Synthetic Metals, 2014, 187, 61-67.	2.1	48
28	Green synthesis of agar/Gum Arabic based superabsorbent as an alternative for irrigation in agriculture. Vacuum, 2018, 157, 458-464.	1.6	48
29	A study of the biodegradation behaviour of poly(methacrylic acid/aniline)-grafted gum ghatti by a soil burial method. RSC Advances, 2014, 4, 25637.	1.7	46
30	Red-light-emitting inorganic La2CaZnO5 frameworks with high photoluminescence quantum efficiency: Theoretical approach. Materials and Design, 2016, 93, 203-215.	3.3	45
31	High electronic excitation induced modifications by 100MeV O7+ and 150MeV Ni11+ ions in Makrofol KG polycarbonate film. Nuclear Instruments & Methods in Physics Research B, 2012, 287, 4-9.	0.6	43
32	CaTiO3:Eu3+, a potential red long lasting phosphor: Energy migration and characterization of trap level distribution. Journal of Alloys and Compounds, 2015, 622, 1068-1073.	2.8	41
33	Combustion synthesis and characterization of blue long lasting phosphor CaAl2O4:Eu2+, Dy3+ and its novel application in latent fingerprint and lip mark detection. Physica B: Condensed Matter, 2018, 535, 149-156.	1.3	40
34	Gamma irradiation induced chemical and structural modifications in PM-355 polymeric nuclear track detector film. Nuclear Instruments & Methods in Physics Research B, 2012, 290, 59-63.	0.6	37
35	Recent advances in rare earth doped alkali-alkaline earth borates for solid state lighting applications. Physica B: Condensed Matter, 2018, 535, 106-113.	1.3	36
36	Evaluation of a conducting interpenetrating network based on gum ghatti-g-poly(acrylic acid-aniline) as a colon-specific delivery system for amoxicillin trihydrate and paracetamol. New Journal of Chemistry, 2015, 39, 3021-3034.	1.4	35

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37	Influence of Ho ³⁺ doping on the temperature sensing behavior of Er ³⁺ –Yb ³⁺ doped La ₂ CaZnO ₅ phosphor. RSC Advances, 2016, 6, 84914-84925.	1.7	35
38	Microwave assisted synthesis of ZnO nanoparticles for lighting and dye removal application. Physica B: Condensed Matter, 2016, 480, 36-41.	1.3	35
39	Progress in Diamanes and Diamanoids Nanosystems for Emerging Technologies. Advanced Science, 2022, 9, e2105770.	5.6	35
40	Two-step electrochemical synthesis of Au nanoparticles decorated polyaniline nanofiber. Vacuum, 2013, 93, 79-83.	1.6	34
41	A comparative investigation on ion impact parameters and TL response of Y ₂ O ₃ :Tb ³⁺ nanophosphor exposed to swift heavy ions for space dosimetry. Journal of Alloys and Compounds, 2014, 589, 5-18.	2.8	34
42	Methylene Blue Dye Adsorption from Wastewater Using Hydroxyapatite/Gold Nanocomposite: Kinetic and Thermodynamics Studies. Nanomaterials, 2021, 11, 1403.	1.9	33
43	Role of swift heavy ions irradiation on the emission of boron doped ZnO thin films for near white light application. Journal of Alloys and Compounds, 2014, 594, 32-38.	2.8	32
44	Gamma radiation induced modifications in Au-polypyrrole nanocomposites: Detailed Raman and X-ray studies. Vacuum, 2014, 99, 265-271.	1.6	31
45	The role of growth atmosphere on the structural and optical quality of defect free ZnO films for strong ultraviolet emission. Laser Physics, 2014, 24, 105704.	0.6	29
46	Effects of O ⁷⁺ and Ni ⁹⁺ swift heavy ions irradiation on polyacrylamide grafted Gum acacia thin film and sorption of methylene blue. Vacuum, 2015, 111, 73-82.	1.6	29
47	Effect of swift heavy ion beam irradiation on Au–polyaniline composite films. Vacuum, 2013, 90, 59-64.	1.6	28
48	Nanoparticles as fingerprint sensors. TrAC - Trends in Analytical Chemistry, 2021, 143, 116378.	5.8	28
49	Synthesis of gum acacia-silver nanoparticles based hydrogel composites and their comparative anti-bacterial activity. Journal of Polymer Research, 2022, 29, 1.	1.2	28
50	Preparation of gum acacia-poly(acrylamide-IPN-acrylic acid) based nanocomposite hydrogels via polymerization methods for antimicrobial applications. Journal of Molecular Structure, 2020, 1215, 128298.	1.8	27
51	Structural and luminescence responses of CaMoO ₄ nano phosphors synthesized by hydrothermal route to swift heavy ion irradiation: Elemental and spectral stability. Acta Materialia, 2017, 124, 109-119.	3.8	26
52	A novel near white light emitting phosphor KSrYSi ₂ O ₇ :Dy ³⁺ : Synthesis, characterization and luminescence properties. Vacuum, 2020, 174, 109179.	1.6	26
53	Investigation of structural, morphological and optical properties of Mg: ZnO thin films prepared by sol-gel spin coating method. Vacuum, 2017, 146, 524-529.	1.6	25
54	Effects of swift heavy ion beam irradiation on the structural and morphological properties of poly(methacrylic acid) cross-linked gum ghatti films. Vacuum, 2014, 101, 166-170.	1.6	24

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55	Dopant distribution and influence of sonication temperature on the pure red light emission of mixed oxide phosphor for solid state lighting. <i>Ultrasonics Sonochemistry</i> , 2016, 28, 79-89.	3.8	24
56	Polypyrrole microspheroidals decorated with Ag nanostructure: Synthesis and their characterization. <i>Applied Surface Science</i> , 2013, 280, 950-956.	3.1	21
57	Recent advances in enhanced luminescence upconversion of lanthanide-doped NaYF ₄ phosphors. <i>Physica B: Condensed Matter</i> , 2018, 535, 278-286.	1.3	20
58	Microwave-assisted synthesis of gum gellan-cl-poly(acrylic-co- methacrylic acid) hydrogel for cationic dyes removal. <i>Polymer Bulletin</i> , 2020, 77, 4917-4935.	1.7	18
59	A Short Review on Rare Earth Doped NaYF ₄ Upconverted Nanomaterials for Solar Cell Applications. <i>Materials Today: Proceedings</i> , 2020, 21, 1868-1874.	0.9	18
60	Gum ghatti-based biodegradable and conductive carriers for colon-specific drug delivery. <i>Colloid and Polymer Science</i> , 2015, 293, 1181-1190.	1.0	17
61	Synthesis, characterization and upconversion luminescence of core-shell nanocomposites NaYF ₄ :Er/Yb@SiO ₂ @Ag/Au. <i>Vacuum</i> , 2018, 157, 492-496.	1.6	14
62	Synthesis, characterization, and anti-microbial activity of superabsorbents based on agarose-poly(methacrylic acid-glycine). <i>Journal of Bioactive and Compatible Polymers</i> , 2017, 32, 74-91.	0.8	13
63	Analysis of writing/printing paper via Thermogravimetric Analysis: application in forensic science. <i>Australian Journal of Forensic Sciences</i> , 2019, 51, 22-39.	0.7	13
64	Neem gum based pH responsive hydrogel matrix: A new pharmaceutical excipient for the sustained release of anticancer drug. <i>International Journal of Biological Macromolecules</i> , 2020, 142, 742-755.	3.6	13
65	DOE-based synthesis of gellan gum-acrylic acid-based biodegradable hydrogels: screening of significant process variables and <i>in situ</i> field studies. <i>RSC Advances</i> , 2022, 12, 4780-4794.	1.7	13
66	A comparative study of the effect of Ni ⁹⁺ and Au ⁸⁺ ion beams on the properties of poly(methacrylic) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	1.4	12
67	Applications of AES, XPS and TOF SIMS to phosphor materials. <i>Surface and Interface Analysis</i> , 2014, 46, 1105-1109.	0.8	12
68	Influence of Fe-doping on the structural, optical and luminescent behavior of ZnO thin films deposited by spin coating technique. <i>Vacuum</i> , 2017, 146, 478-482.	1.6	12
69	Nanohydroxyapatite-, Gelatin-, and Acrylic Acid-Based Novel Dental Restorative Material. <i>ACS Omega</i> , 2020, 5, 27886-27895.	1.6	12
70	Manipulating selective dispersion of reduced graphene oxide in polycarbonate/nylon 66 based blend nanocomposites for improved thermo-mechanical properties. <i>RSC Advances</i> , 2017, 7, 22145-22155.	1.7	11
71	Swift heavy ions induced surface modifications in Ag-polypyrrole composite films synthesized by an electrochemical route. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2014, 323, 7-13.	0.6	9
72	Enhanced upconversion study of Er ³⁺ -Yb ³⁺ codoped NaYF ₄ phosphors synthesized by the reverse microemulsion method. <i>Ceramics International</i> , 2018, 44, 13649-13653.	2.3	9

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73	Multivariate analysis for forensic characterization, discrimination, and classification of marker pen inks. <i>Spectroscopy Letters</i> , 2018, 51, 205-215.	0.5	9
74	Synthesis of yellow emitting bis-pyrimidine based purely organic phosphors. <i>Journal of Luminescence</i> , 2014, 149, 61-68.	1.5	6
75	Ion-induced modification of structural, optical and luminescence behaviour of Gd ₂ MoO ₆ nanomaterials: A comparative approach. <i>Vacuum</i> , 2016, 128, 146-157.	1.6	6
76	Advances in phosphors based on organic materials for light emitting devices. <i>Physica B: Condensed Matter</i> , 2016, 480, 105-110.	1.3	5
77	Conducting Polymer Hydrogels and Their Applications. <i>Springer Series on Polymer and Composite Materials</i> , 2017, , 193-221.	0.5	5
78	A system for computer-aided gating design for multi-cavity die-casting dies. <i>Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture</i> , 2017, 231, 1983-1999.	1.5	4
79	Electronic energy transfer effects of Ti ³⁺ and Sr ²⁺ ions irradiations upon structural, optical and chemical properties of Kapton-H polymer. <i>Vacuum</i> , 2018, 157, 447-452.	1.6	4
80	Ag ⁷⁺ ion induced modification of morphology, optical and luminescence behaviour of charge compensated CaMoO ₄ nanophosphor. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2016, 384, 76-85.	0.6	3
81	Preparation and Characterizations Graft Copolymer of Poly(acrylamide-aniline)-Grafted Gum Ghatti. <i>Materials Today: Proceedings</i> , 2020, 21, 1856-1861.	0.9	3
82	Synthesis of Hydrogels by Modification of Natural Polysaccharides Through Radiation Cross-Linking Polymerization for Use in Drug Delivery. <i>Springer Series on Polymer and Composite Materials</i> , 2019, , 269-292.	0.5	2
83	Polymer/Carbon Nanocomposites for Biomedical Applications. <i>Advances in Material Research and Technology</i> , 2022, , 109-150.	0.3	2
84	Introduction to phosphors and luminescence. , 2022, , 3-41.		1
85	Raman and AFM study of gamma irradiated plastic bottle sheets. , 2013, , .		0
86	Swift Heavy Ion Synthesis and Modifications of Nanophosphors for Dosimetric Application. <i>Advances in Chemical and Materials Engineering Book Series</i> , 0, , 1-25.	0.2	0
87	Rare-earth-activated phosphors for forensic applications. , 2022, , 215-246.		0